

Dalhousie University
Faculty of Agriculture
AGRI5710 – Protein Structure and Function (Enzymes)
Summer 2014
Schedule: June 16–July 9, 2014 (5 meetings)

Instructor: Dr. Chibuike Udenigwe, Office Cox 124, Phone (902) 893-6625, cudenigwe@dal.ca

Module Description. The module will involve discussions, literature review and formal presentations on the structure and physiological roles of enzymes as well as their involvement in health aberrations, and advances on their use in food, environmental and agricultural applications. Emphasis will be made on the stability, kinetics of enzyme-catalyzed reactions, enzyme inhibition patterns and their practical implications.

Requirements. Students must be working with or interested in using enzymes in their graduate thesis project or other related projects.

Module Content. Weekly meetings will involve discussions led by the instructor and students. Students are required to choose an enzyme related to their graduate thesis for the module. The final topic must be discussed with the instructor during the first day of class. The student will conduct a literature review on the selected enzyme and lead a 30-minute class discussion on the topic. The presentations will be evaluated by the instructor and peers. Students are required to write a mini-review to summarize their study focusing mainly on information reported in recent peer-reviewed original journal articles. The paper should be written following the format of a top peer-reviewed journal chosen by the student, and must be less than 15 pages in length (excluding cover page, references, figures, tables), double line spaced with 12-pt Times New Roman font and 1-inch page margins.

Evaluation. Participation* (20%), Paper (40%) and Presentation (40%)

*Based on contributions to discussion during face-to-face meetings

Materials

Recommended textbook: Marangoni, A.G. (2003). *Enzyme Kinetics: A Modern Approach*. John Wiley & Sons, 248 pages

In addition, topics for class discussions will be derived from peer-reviewed scientific journals, and any other relevant materials will be distributed before or during the class meetings.